

## Cyberdog Usability Testing ♦ Round 4

This report documents usability testing performed on the d3 build of Cyberdog. This testing took place on Thursday, September 16, and Friday, September 17, in the *Piaget's Kids* usability labs in R&D2. For more information on testing contact Pat Holleran ([holleran@apple.com](mailto:holleran@apple.com), 974-1427).

### Testing Goals

Goals of the present testing protocols were to investigate the usability of the basic pathfinder/notebook/log model currently implemented in Cyberdog. Additionally, features which had not previously been tested, such as universal search, reading newsgroups, sorting items in the log, etc., were also investigated.

The "Internet Toolkit" aspects of the product—Cyberbuttons, embedded Cyberitems, personalized pathfinders, etc.—were not testing during these sessions. Subjects who participated in these sessions will be brought into the lab in two weeks to participate in an investigation of those capabilities.

### Procedure

Four subjects were tested during these sessions. All four were employees of Apple Computer. Three were moderately sophisticated users of the Macintosh and one was an experienced but unsophisticated user. At least two had seen demonstrations of the Cyberdog software at some time in the past, although they did not appear that familiar with details of the product.

The tester read a series of instructions to subjects in the *Piaget's Kids* usability lab, and then moved into the control room for the remainder of the test session. Subjects were given a script with a series of tasks and asked to read the instructions aloud, complete the tasks, and "think aloud" while carrying them out. They were able to communicate with the tester via microphone during the sessions. The subject's interaction with the software was recorded on videotape for further review. Subjects typically took about 30-45 minutes to complete the tasks. Following completion of the task the tester conducted a short debriefing.

Prior to the test the Cyberdog software was set up in a folder called "Internet Access" which was located on the desktop. Within this folder, four items were displayed: "Internet Pathfinder", "Personal Notebook", "Other Pathfinders" (containing the Cyberdog "demo" pathfinders), and "Parts to Create PFinders" (including only cyberbutton stationary and a clock part). This window is displayed on the next page. The latter two items were not used in the current testing.

The script for the current testing is included in Appendix A. Subjects were required to explore the network, search for information on particular topics, move items to the notebooks and manipulate them there, work with the log, and find and read

postings in a particular discussion area.

## Results

### Overview

In general, these testing sessions revealed that the usability level of the current Cyberdog software is very high. All four users were able to complete all of the tasks with little or no assistance from the tester.

The general pathfinder/notebook/log model seemed to be understood by the people tested, although unsophisticated users may have some initial confusion about personal notebooks.

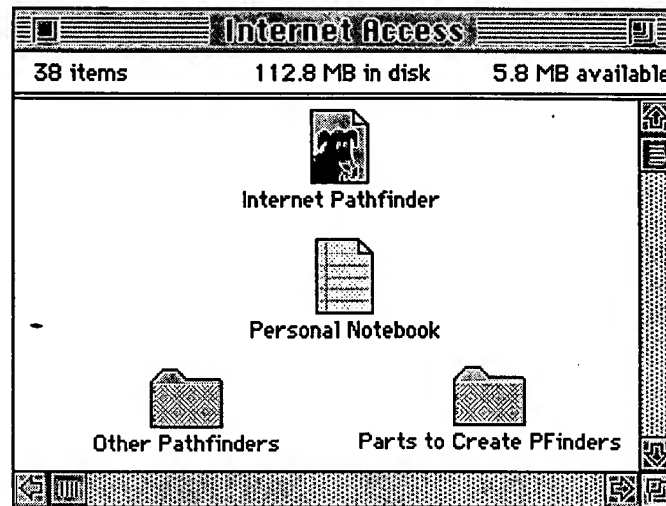
Also encouraging was the fact that all of the users appeared to enjoy using this software, and each was willing to return in a couple of weeks to perform more tasks. One user, who typically does not enjoy participating in usability testing, said at the end of the test "That wasn't so bad!"

However, as described in the "Problems" section below there are many details which created some difficulty for most of those tested and which clearly need further design attention. Also, there are many other navigation and information location problems which were obvious during the tests but are more related to the way information is organized on the Internet than to the Cyberdog software specifically.

### Good

People had few problems with many aspects of the product:

- All users went immediately to the Pathfinder during the exploration period, although one or two did mention that there was not indication about what they were supposed to click.
- People had few problems navigating around the network, even learning to click on the "diamonds" in the Web browser to move to other locations.



- The three most sophisticated subjects had little problem understanding the intent of the notebooks, although the least sophisticated one tended to move things to the desktop to save them for future reference.

• People were, in general, able to manipulate items in the notebook pretty successfully, including creating and deleting categories, moving items from one category to another, and folding and unfolding category displays. There were problems with naming categories, however, which are discussed in greater detail below.

- People went naturally to the "Search" feature without directions to do so, and made successful use of it to find items they were asked to locate.
- People understood and properly navigated the newsgroups and news postings windows.

### Problems

However, people also had some specific problems with various components of the software. The **Universal Search** feature created a number of such problems:

- The "syntax" of the search string was decidedly unclear for users. Small changes in specification (e.g. "Tasmania" versus "Tasmanian") returned quite different results. Also, users repeatedly wanted to know how to limit the search and weren't clear to how to accomplish this.
- The "or" nature of multiple words provided search results which were very confusing. For example, a search string of "Tasmanian Parks" returned, among other entries, information about "Tasmanian Sodomy Laws", which was remarked upon by one or two users.
- The "batch return" of flocks of entries was disorienting to some users. That is, large groups of entries were returned in waves which visibly displace the entries people are looking at.
- Users wanted feedback about how long a search was going to take, or more information about what was going on. One user wondered if a search across the whole Internet was going to take a very long time.
- There was no obvious way to stop searches (which actually could be accomplished by closing the search window). One subject suggested that "command-" should accomplish that task. Subjects also experienced some problems in interacting with the **personal notebook**.
- When a new category was created, it appeared below the visible portion of the window, thus presenting no feedback that the category had been successfully located and confusing all users about where it was.
- Subjects had great difficulty renaming categories. Although most figured it out eventually, it was not intuitive to double click on the name to put it in "edit mode." Typing a return when naming a category also caused the text previously typed in to disappear. At least two of the users appeared to always type a return after finishing typing the name they had selected.
- Moving items from one category to the other was extremely difficult for users when both categories could not be made to appear in the window at the same time. This problem is due to the fact that the notebook windows do not presently autoscroll.
- One user was confused between the "Set Default Notebook" and "Show Default Notebook" commands, repeatedly selecting the former when she intended the latter.
- One user expressed the desire to have a confirmation dialog when items, especially a category, are deleted (as, for instance, by dragging items to the trash).
- The idea of "subscribing" to a newsgroup by putting it into the notebook was clear to some users but not all.
- The idea of the notebook as a location for your "favorite places" may turn out to be a problem for unsophisticated users.
- One user was confused as to why there were lots of things in the default personal notebook before she put anything there, assuming the previous person had failed to "clean up."

Although the log was used successfully by everyone, there were some significant problems:

- No one guessed what the "hand" in the log was supposed to represent. Comments included "What's this little hand?" and "I have no idea what the little hand in it means."
- People were not able to clearly articulate what the "hierarchical" display in the log was supposed to represent.

Other components of the system provided some problems as well:

- Users consistently double-clicked on items which require only a single click, such as Cyberbuttons and links in Web pages.
- Users had consistent problems locating items in lists even when they were clearly visible in the window.
- At least one user expressed discontent that window names often didn't match the name of the items which were opened to display them.
- Users were consistently unhappy about the number of windows which, when opened, displayed on partial lines of text rather than being opened to the full right edge.
- The display of newsgroup labels was too far to the right in the window to be of much use to users searching for the "Bay Area" newsgroup collection.
- The display of an folded "apple.com" news server in a window after the "Discuss" button was clicked gave every subject some initial hesitation. Subjects did not realize they were looking at a "news server."
- The sudden shift from "page-oriented" Web browsers to "Finder-oriented" gopher browser was a little disorienting for at least one user (few actually ever got to a Gopher

browser, spending most of their time on the World-Wide Web).

- The most unsophisticated user was put off by URL specifications which she ran into in one Web page. When asked what she thought it was she said that it "looks like an IBM-type command."
- Users tended to overuse the "New" item in the File menu when trying to create other objects (such as categories), inadvertently creating new notebooks and pathfinder documents.

## Appendix A. Test Script

Thanks for coming around today to help us. We're presently developing software which would allow users to find and retrieve information on the world-wide Internet which you may have been hearing about. We have an early version of this software and we're interested in seeing how you might go about using it.

You'll be asked to perform a number of tasks; please attempt to perform them in the best way you can. Don't worry about whether you can complete the tasks or not; just do your best. We're not testing you; we're just trying to determine how we can improve the software to make it as easy to use as possible.

Also, as you go about performing these tasks, would you please speak your thoughts out loud? We'll be recording your actions and your voice and this will help us understand why you're doing what you're doing.

Finally, let me mention again that what you're working with is software which is still early in the development phase, not the final product. Many things will not work as they will in the final product; on occasion, the system may crash, but don't worry about that. I'll try to mention when something won't work correctly so you won't be misled or confused.

There is one problem I will mention right up front. In most of the windows there is a bug in the underlying software which makes it necessary to click in the grow box in the lower right-hand corner of the screen before the information in the window can be selected or manipulated. I'll point this out if you forget about it. I'll be observing you in the next room, behind the glass; some other observers may also join me in there from time to time. I'll be able to hear you as well as speak to you, so don't hesitate to ask if you have any questions.

Do you have any questions right now before we get started?

Please read these instructions aloud and perform the tasks detailed below. When you get to the small hand symbol (👉) this means you should go ahead and perform the task you've been asked to do, so please don't read beyond that place until you've attempted to complete that instruction.

## Task 1: Look Around

The materials you'll need to interact with the Internet are contained in the folder called "Internet Access." That window is displayed on the screen in front of you.

Before asking you to do any specific tasks, we'd like you to just look around the Internet using these tools. Go ahead and do that for about 10 minutes. Please note again that this is only a prototype and so it won't be possible to do many of the things you'd ordinarily like to do. (👉)

## Task 2: Finding Information

Please close all of the windows and go back to the Finder. Open the document you see in the Internet Access window called "Internet Pathfinder." You'll use this as your jumping-off point for your interaction with the Internet for the rest of the tasks.

First, let's suppose you have an interest in parks of various kinds in foreign countries. In particular, you're interested in parks in Tasmania. Using the Internet Pathfinder, see if you can find if there is information on the Internet about Tasmanian parks. (👉)

You are also quite interested in art, and in particular about painting. See if there is any information on the Louvre in Paris on the Internet. (👉)

Since you like art, and the Louvre in particular, it has occurred to you that you might like to visit a couple of the places you have found on the Internet again and again to see what's new. See if you can figure out a convenient way of making it easy to go directly to one of these places again in the future without all of the navigation that was necessary

this time. (👉)

## Task 3: Exploring the Internet

Sometimes you may go out onto the Internet to look for something specific, as you have been doing with the last task. Other times, you may simply want to wander around to see what's available. (👉)

Without using the "Search" button, look around the network a little bit to see if you can find some information about astronomy. If you find some, see if there's something about the recent collision of the comet Shoemaker-Levy with the planet Jupiter. (👉)

Now see if you can find some information about travel, and take a look at it. (👉)

## Task 4: Tracking Where You've Been

You have been moving around different places on the Internet during your session. Please find a way to display a list of all of the various places you have been. (👉)

Please display this list in the order in which you have visited the locations. (👉)

Please display this list in alphabetical order. (👉)

Please display this list in hierarchical order. Explain what this means (explain out loud). (👉)

Please return as quickly as possible to one of the places on the list. (👉)

Go back to the list again. Pick one of the items on the list, and do what's necessary to keep your own personal copy of the item so you can access the place it represents again directly. (👉)

## Task 5: On-Line Discussions

There is a place on the Internet where people engage in on-line conversations about a number of topics. Let's suppose you are interested in the topic of bicycles in the San Francisco Bay area and would like to follow the items people are posting about that topic. Please find this on-line conference and read a couple of the postings there. (13)

You're done! Thank you very much.

Although you can't presently do this in this version of the software, please describe out loud how you think you might go about posting a reply or follow up message to the one you just read. (13)

Let's suppose that you think you're going to want to follow the discussions in this area. Do what you think is necessary to "subscribe" or make it easy to access this topic in the future, so you don't have to navigate through other topics to find the Bay Area bicycles topic area. (13)

## Task 6: Working with Your Favorite Places

In some of the tasks you've already performed you've used a personal notebook to store items you wanted easy access to. Please display your default notebook now. (13)

All of the items in the category "Fun Stuff" are visible right now. Can you make it so that only the category title itself is visible in the window? (13)

There is an item in the notebook called "Apple Higher Ed Gopher Server." Can you find that item for me? (13)

Please move the item "Apple Higher Ed Gopher Server" to the category "Starting Points." (13)

There is an item called "ba.food" in the notebook. Please remove it. (13)

Please create a new category called "Pictures." Then move the items "Gallery" and "Image and Multimedia Library - Victoria Freeman" into it. (13)

Please delete the category "Work" along with all of its contents. (13)

Help

Logout

Main Menu

Search Form

Posting Counts

Show S Numbers

Edit S Numbers

## Search Results -

| Terms                 | Documents |
|-----------------------|-----------|
| opendoc with exten\$5 | 6         |

12.29.99

Database: All Databases (USPT + EPAB + JPAB + DWPI + TDBD)

Refine Search:

opendoc with exten\$5

## Search History

| <u>DB Name</u> | <u>Query</u>               | <u>Hit Count</u> | <u>Set Name</u> |
|----------------|----------------------------|------------------|-----------------|
| ALL            | opendoc with exten\$5      | 6                | <u>L13</u>      |
| USPT           | 5557722.dwku.              | 1                | <u>L12</u>      |
| USPT           | 5548770.dwku.              | 1                | <u>L11</u>      |
| USPT           | 5418942.dwku.              | 1                | <u>L10</u>      |
| USPT           | 5408655.dwku.              | 1                | <u>L9</u>       |
| USPT           | 5347632.dwku.              | 1                | <u>L8</u>       |
| ALL            | 11 and mosaic              | 10               | <u>L7</u>       |
| USPT           | 5751961.dwku.              | 1                | <u>L6</u>       |
| USPT           | 5689641.dwku.              | 1                | <u>L5</u>       |
| USPT           | 5666293.dwku.              | 1                | <u>L4</u>       |
| USPT           | 5617539.dwku.              | 1                | <u>L3</u>       |
| ALL            | 11 and replaceable         | 31               | <u>L2</u>       |
| ALL            | component? with extensible | 542              | <u>L1</u>       |